

What is claimed:

1. A sealed wheel case for use on a vibratory device for
vibrating aggregate material, the vibratory device having a frame and a
rotating shaft extending transversely across the frame and having a wheel, a
5 driven portion of the shaft being operatively coupled to a drive system, the
sealed wheel case comprising:

a housing having a base, a peripheral sidewall, and a cover, the
housing being sized to receive therein the wheel and further being adapted to
house therein a quantity of lubricating oil for lubricating the wheel, the cover
10 including an aperture adapted to receive therethrough the driven portion of
the shaft;

a seal operatively connected to the shaft adjacent the aperture of the
cover;

15 an annular baffle mounted to an inside surface of the cover and
extending into the wheel case, the annular baffle positioned on the inside
surface of the cover to generally surrounding the shaft and the seal; and

a plurality of attachment bolts arranged to secure the housing to the
frame.

20 2. The sealed wheel case of claim 1, wherein the seal is a
labyrinth seal.

25 3. The sealed wheel case of claim 1, wherein the annular baffle
includes an inner edge, the inner edge being disposed adjacent the wheel to
form a gap therebetween.

4. The sealed wheel case of claim 2, the annular baffle having an inner edge disposed generally adjacent the wheel, the annular baffle sized to define an annular gap between the inner edge of the annular baffle and the wheel, the annular baffle sized to minimize the size of the gap to thereby shield the seal from the lubricating oil.

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5. A sealed wheel case for use on a vibratory device for vibrating aggregate material, the vibratory device having a frame and a rotating shaft extending transversely across the frame and having a wheel, a driven portion of the shaft being operatively coupled to a drive system, the sealed wheel case comprising:

a housing having a base, a peripheral sidewall, and a cover, the housing defining an interior sized to receive the wheel, the housing adapted to hold quantity of lubricating oil for lubricating the wheel, the cover including an aperture adapted to receive therethrough the driven portion of the shaft;

a seal operatively connected to the shaft adjacent the wheel case aperture;

annular baffle means for substantially isolating the seal from the interior of the wheel case, the means carried by the housing cover,; and

a plurality of sealed attachment bolts for securing the housing to the frame.

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6. The device of claim 5, wherein each of the attachment bolts includes:

a shank;

5 an inner end having a pressed on collar, the inner end and the pressed on collar disposed within the housing and having an inner contact surface, the inner contact surface defined by the pressed on collar;

an outer end disposed outside the wheel case and having an outer contact surface adjacent the frame;

10 an inner control washer disposed between the inner contact surface and the housing base, the inner control washer having a first predetermined thickness and further having an aperture therethrough sized to form with the bolt shank an inner annular cavity; and

15 an O-ring sized for insertion in the inner annular cavity, the O-ring having a second predetermined thickness greater than the first predetermined thickness;

20 an outer control washer disposed between the outer contact surface and the frame, the outer control washer having a third predetermined thickness and further having an aperture therethrough sized to form with the bolt shank an outer annular cavity, and an outer O-ring sized for insertion in the outer annular cavity, the outer O-ring having a fourth predetermined thickness greater than the third predetermined thickness;

25 whereby in response to securement of each attachment bolt by attaching the pressed on collar each O-ring is compressed to substantially fill its adjacent annular cavity, thereby preventing the lubricant from escaping the housing and further preventing the pressed on collar from loosening.

7. A vibratory device for vibrating aggregate material and comprising:

5 a frame;

 a rotating shaft extending transversely across the frame and having a wheel, a driven portion of the shaft adapted for attachment to a drive system;

10 a wheel housing, the housing including a base, a peripheral sidewall, and a cover, the housing defining an interior sized to receive a rotatable wheel, the interior adapted to hold a quantity of lubricating oil;

 an aperture through the cover, the aperture adapted to receive therethrough the driven portion of the shaft;

15 a seal operatively engaging the driven portion of the shaft and arranged to inhibit lubricant from escaping the interior of the housing;

 an annular baffle carried by an interior surface of the housing and positioned to surround the seal and the aperture, a cylindrical end of the baffle cooperating with the wheel to define an annular gap, the baffle sized to minimize the size of the gap, thereby inhibiting the flow of lubricating oil from the wheel toward the seal; and

 a plurality of sealed attachment bolts for securing the housing to the frame.